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Explanation of a natural phenomenon,  
translating the science into layman's language.



# Partial Migration

When people refer to a bird being a “migrant” or not, the usual understanding is that every member of its species will undertake the journey prescribed for its kind. For example, all Cuckoos are expected to depart from Europe in the autumn and return in the spring, without any dissenters for either journey. This, if you like, is “normal” migration.

But a good many species don't follow such strictures, and instead exhibit what is termed “partial migration”. Within their populations some individuals migrate and some don't. These individuals share the same living places in the spring and summer, and they cannot be separated by sight or by the way they behave in the breeding season, but as soon as autumn comes they show widely divergent migratory behaviour.

Most birdwatchers will appreciate the existence of partial migration even without necessarily knowing its name. If you were asked “Is the Meadow Pipit a migrant?” you might remember seeing them flying over in October, obviously going somewhere, yet also know that they are classed as resident in Britain. The conundrum is explained by partial migration.

The phenomenon arises when there is a fine ecological balance between the advantages and disadvantages of migrating. For example, a bird staying put on its breeding grounds will have a good chance of surviving so long as there is a mild winter, and will reap the benefits of not migrating by acquiring a territory earlier in the year than would be possible for a migratory individual, and potentially fitting in more breeding attempts than its rival. But these advantages are lost in a harsh winter, when a sedentary bird has a greatly reduced chance of survival. Should it succumb as expected, its vacancy will be filled by the migrant bird arriving after the winter has passed, this latter individual now reaping the benefits of its migratory behaviour. The vagaries of climate will transfer advantages to one set of birds or the other over the course of time, which means that partial migration will persist within the population as a whole.

A great number of species are partial migrants, and a given species may also be a partial migrant in one part of its range and a complete migrant in another. In fact some birds may exhibit migratory behaviour at one climatic extreme and resident behaviour at the other, with partial migration in between.

Partial migration can be viewed as “a form of evolutionary turntable between sedentariness and migratoriness”, as Berthold (2001) puts it. It allows the transfer between one and the other by natural selection. If the climate of a place changes over the years to become consistently milder or more severe – and so shifts the advantage of being a migrant or otherwise decisively one way or another – then having the system of partial migration within a population will allow it to adapt one way or another.

**Extract from “Bird Migration” New Holland Publishers 2007**